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ABSTRACT

This document discusses an Israeli project which targeted intelligent students in disadvantaged areas for special help with the objective being to encourage their college attendance. The introduction describes problems which confront any educational system in a democratic society, such as fostering adolescent development and encouraging quality learning. The underlying assumptions of the project are described, including: (1) the need for a joint school-university development coalition; (2) a continually developing experimental entity; (3) the priority of adolescents as subjects; (4) focus on the gifted among the socially disadvantaged who are capable of higher education; (5) belief that the intellectual potential of disadvantaged areas is greater than that represented by aptitude and achievement test results; (6) belief in a cognitive orientation with an affective basis; and (7) the belief that adolescent learning is aimed at the promotion of responsibility for self-development and coping competence. The organization of the project and the composition of the pupils is described. Twelve elements of the program are listed which range from identification of gifted students to contact with parents and university cooperation and support. An evaluation of the project is also included in the document. The evaluation results state that it was clear that participation in the project increased the readiness and willingness of the students to consider studying in a university which contributed positively to scoring higher on matriculation and university entrance examinations. (ABL)

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UNIVERISTY PROJECT FOR ADVANCEMENT OF ADOLESCENTS FROM DISADVANTAGED AREAS TO ENTER HIGHER EDUCATION

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I. Preface

Over the past five years the project has owed the success and fulfillment of its role to the contribution of hundreds of committed individuals. These important people include the officials of the Tel Aviv municipality, administrators and faculty of Tel Aviv University, the staff of the Ministry of Education, the administrators, counselors and staff-members of the three schools participating in the project, and others we consulted with or requested to share the process with us. It is impossible to list them all by name and identify exactly what they contributed, but we can express our feelings of gratitude to each one on the behalf of the pupils and their parents.

The following individuals, however, deserve special mention:

Mr. Shlomo Lahat, the mayor of Tel Aviv who believed in the need for a project of intervention and succeeded in obtaining the basic grant from the American Foundation, unknown to us, through the Tel Aviv Development Fund.

Dr. Shimshon Shoshani, formerly the Superintendent of Schools in Tel Aviv and today the Director-General of the Ministry of Education. He was an active partner in the initial design and development of the project and was prepared to shoulder responsibility whenever necessary.

Professor Michael Chen, Dean of the School of Education, who believed in the project and provided daily support above and beyond the call of duty.

Mr. Eliezer Shmueli, formerly Director-General of the Ministry of Education and Chairman of the Association for the Advancement of Education and Dr. Palti Stavi, Director of the Association, who were active partners in financing the project and sharing in its development.

Mr. Itzhak Cohen, formerly the principal of School No. 9 and currently in charge of secondary education in Tel Aviv, and Ronit Tirosh, the coordinator of the project in the school and its present principal. They believed in the importance of the project and contributed everything possible to ensure its successful operation.

Mr. Eli Rahamim, principal of School No. 7 and Nirah Navon, deputy principal and coordinator of the project in the school. They believed in the project and contributed towards its successful operation.

Mrs. Chemda Kroiser, supervisor of secondary schools from the Tel Aviv Board of Education who cooperated in project development, planning and administration, and Rachel Weisser-Granich, who served as coordinator of the project during the first three years and who was in charge of the counseling program during the latter two years. Ms. Weisser-Granich was an active partner in the design and development of the program, sharing its problems and achievements. Ruth Harrari took over from her as coordinator of the project during the last two years and managed its operations.

Ya'arah Gootman, Executive Secretary of the School of Education and Avi Wallenitz who is in charge of finance in the School, both of whom took care of the daily responsibilities and tried to help whenever necessary.

Professor Mordechai Miron, who served as chairperson of the advisory committee on evaluation and helped the project attain a high level of effectiveness.

Edna Affek, Zila Shalem, Yehudit Shteinman and Naomi Friedman, the team which developed the curriculum and the program for critical thinking and communication; Shoshana Feldman, who coordinated the preparation of curricular materials in social development; Chedva Vital

and Bar Irit , who were in charge of curriculum development and program management in English; and Gazit Avikam , who was in charge of the program in mathematics. Each of these team members has done whatever was in his power to facilitate learning within his field of specialization.

We want to add that Professor Moshe Mani, president of Tel Aviv University, believed in the importance of the project, shared in its promotion and was ready to help whenever necessary.

Although so many persons contributed to the design, development and evaluation of the project, the responsibility for dealing with intervention limitations, problems and restrictions, as well as for any resulting reports rests with the project director and the director of evaluation, authors of this report and the recommendations for the future.

Moshe Smilansky,
Project Director

Moshe Israelshvili,
Deputy Director, in charge of Evaluation

II. Introduction

Three complex problems confront any educational system in a democratic society in an advanced stage of modernization:

1. How to encourage a striving for quality-learning and excellence in the face of political decisions having to do with the democratization of post-elementary education and attempts to attain social integration.
2. How to ensure that the social institution called "school" will evolve in harmony with the changing needs and stated aims of pupils, parents, teachers and society-at-large.[1]
3. How to foster adolescent development in general and particularly those residing in disadvantaged areas, so that they might attain optimal realization of their potential, without disregarding their needs and motivation, and without departing from the framework of the ecological system of their community or society.

We developed the fostering projects in the 1960's with these issues in mind (M. Smilansky, 1957; M. Smilansky, B. Burg, T. Krieger, 1966; M. Smilansky, D. Nevo, 1979). In the 1970's we tried to confront these issues by establishing the Neta Project (M. Smilansky, 1989) which is still undergoing changes and development. The same issues arise once more in the design of the present project, in the 1980's,

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[1]This area presents a particularly acute problem when we are dealing with schools in disadvantaged areas: demographic fluctuations brought about by mobility--between parts of the country as well as from one part of an urban area to another--affect the pupil composition, the social climate and the level of mutual expectations of achievement on the part of the students as well as the teachers.

which is aimed at the future. As a result of social changes and the results of research within the various fields concerned, the focal areas and activity patterns have changed from project to project.

A study of abilities and academic achievement levels in schools in Jaffa and neighborhoods in southern Tel Aviv[2] (comprising about one-third of the pupil population of Tel Aviv-Jaffa) has revealed social data with grave implications in three areas:

First, the data point to social re-segregation of segments of the population in early adolescence, based on ethnic group, parents' education, and intellectual ability of the students. This occurs despite official policy supporting social integration in the schools, in accordance with prevailing Israeli ideological feelings.

Second, it would seem, from IQ criteria, that a low proportion of the students are capable of continuing their education in academically-oriented high schools and university. Moreover, when they arrive in the regional Junior High School (Grade 7), their achievement is about 1.5-2 years behind those of pupils from north Tel Aviv.[3]

Third, the proportion of gifted students within the classes declines with age.[4] In some schools gifted students comprise only 10% of the overall ninth grade student population. This may be explained by the fact that some of the gifted students leave the schools--either their families move away or they attend schools outside

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[2]Generally the site of lower income and "disadvantaged" population.

[3]An area characterized by high income, high education of parents, and high level of cultural activity.

[4]Gifted in this context are those with I.Q. 110+.

their district.

The phenomena described in the study have two implications important for society in general:

1. If the negative social selection and social isolation were to continue, there would be a further decline in the cultural level of the neighborhood under discussion. Such a decline would in turn, cause further deterioration in the abilities of the pupils in the local schools.

2. Narrowing the opportunities for intellectual and social development of adolescents with higher intellectual potential results ultimately in a loss to Israeli society in general and to the areas under consideration as well as to the adolescents themselves and their families.

With these implications in mind we felt that any action taken must be jointly undertaken including the university, the municipal authorities, the Ministry of Education and the local schools. It seemed essential that everyone should work together toward changing the current state of affairs and providing opportunity for positive development.

This paper will outline concisely the underlying assumptions and values which guided us, will depict the organizational structure and learning processes and will present the evaluation report. We hope this document will appeal to the public at large, scholars and educators and provide a challenge for those interested in contributing to further development in these fields. Special reports will be prepared for a more in-depth discussion of specific areas of performance.

III. Underlying Assumptions

The following, briefly, are the major assumptions--theoretical values and pragmatic observations--which underlay the project design. Detailed explication has appeared in previous statements or will be referred to in other forums.

1. A joint school-university development coalition is needed. The local and regional schools serving most of the people in the ecological formation described by political observers as a "disadvantaged area" constitute an important institution for the general population as well as its community. It provides the students, their families and the staff a major forum for the development of the ability to cope, the formation of a personal identity, and the decision to adopt a particular life-style.

Once the school is viewed as the focus of such activity, it must be responsible for the quality of life within the institution as well as for the development of the students and staff. The school cannot carry out this responsibility without an auxiliary coalition, whose importance we defined in a previous supportive study (M. Smilansky, 1978). The present project is intended to fulfill a supportive role by enhancing the school's ability to improve its image, effectuate a quality contribution and ensure the optimal possibility of attaining equality of opportunity and excellence for all interested pupils.

The project should provide the school administration, students and staff scholarly and practical support through theoretical exploration, action-research, and development according to research results; the university setting of the project can add the pool of university resources to the learning possibilities available to the students and staff; teachers from the school may take part in special inservice

training programs; formative and summarizing evaluation provides constant feedback. In short, it is a joint effort based on mutual interest, responsibility, interdependence and mutual commitment over the long term.

2. A continually developing experimental entity

As we noted elsewhere (M. Smilansky, D. Sanders, 1972) despite hundreds of studies and experimental programs trying to make schools more effective in aiding pupils from disadvantaged areas, there is no certain, clear way to deal successfully with the three crucial issues outlined in the Introduction. Therefore, we conceived of the project as an entity which would continually evolve and develop and in which we would gradually define achievement goals desired, select and re-select approaches to grappling with the various problems. We tried alternatives which appeared promising, evaluated the processes and the results, made changes according to the conclusions, and took the next steps with all the foregoing in mind. We tried, jointly and systematically, to learn how to develop an educational system which would fit both value and practical definitions: how to identify aptitudes, to arouse strong motivation towards achievement, to develop another's ability to cope, to promote striving for quality and excellence. Details of how a supportive coalition functions have been presented elsewhere (M. Smilansky, 1978).

3. The priority of adolescents as the subject

Every discussion--political, scholarly and pedagogic--raises the same questions: why are we concentrating on dealing with adolescents rather than on the usual assumption that we ought to be doing "preventive" work with young children. We have explained our approach throughout the years in various scholarly and educational documents;

the International Development Bank published a monograph presenting our arguments titled "Priority to Infancy or Adolescence?" (M. Smilansky, 1976). Therefore, we will confine ourselves to the following statements: Adolescence is the most crucial phase in a person's development in a democratic society in an advanced stage of modernization. Adolescence is decisive in the formation of a personal identity, self-development, preparation for social involvement, preparation for family-building and parenthood. We assume that the adolescent is potentially capable of being responsible for formulating his values, his approach and his behavior, but needs proper support.

4. Focus on the gifted among the socially disadvantaged--those capable of post-secondary and higher education

When we set up the experimental project in the early 1960's to identify and supply the needs of gifted children among those students located in boarding schools[5] and in enrichment centers, called "Ma'alot Upward Bound" we described our reasons for this focus:

(1) The more gifted children are the most disadvantaged in the schools within a disadvantaged area. Since most of the population has a low level of ability and achievement, most of the financial and educational resources are devoted to ensuring a minimum level of achievement in basic skills. The social climate does not foster expectations of intellectual ability; the teachers focus their efforts on reaching a relatively low grade average, etc.

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[5]Boarding schools often served children whose families were unable, for various reasons--social and/or economic--to care for them. They were not generally similar to the "prep" schools and private schools located in other western countries.

(2) As the more gifted succeed in their studies, they form a generally positive self-image and believe in their ability to learn. Thus it is possible to arouse motivation for them to achieve still more and propose that they aim for academic goals. With proper support this will be a successful experience.

(3) The more gifted can serve as models and trailblazers for other members of their community, providing personal evidence that Israeli society is indeed open and social mobility is a real possibility for everyone.

(4) By promoting the more gifted adolescents it will be possible, in a relatively short time, to promote social class differentiation in all ethnic and neighborhood groups and destroy the present correlation between ethnic group background and advanced academic studies, professional career choices, public service careers, etc.

We can now add a fifth reason: with the investment in a program which will foster the gifted, they will be less tempted to abandon the local school for selective schools outside their districts. The fact that they remain in their district will not only raise its social status, but their higher knowledge and standards will enrich their classmates' experiences. They will play the role the elite strata were expected to fill in the social integration programs within the framework of junior high school reform decisions.

Follow-up studies (Smilansky, Burg, Krieger, 1966; Smilansky & Nevo, 1979; Zorman, 1988) on students who were "fostered" confirmed these assumptions for the most part. However, the social situation in Israel has changed in the course of 20-25 years. At first the problem was to make sure the doors to secondary education remained open, to

develop motivation for learning and willingness to cope with other's expectations. Today, on the other hand, the problem is to ensure the quality of secondary education, open the doors to the university, develop motivation to make the effort to strive for intellectual achievement and a willingness to confront the growing normative demand for academic study and professional mobility.

Despite the progress made by many adolescents from disadvantaged areas, the fact is that the proportion of university students from these groups is still very low. The increase from 9,275 university students in 1960 to 75,000 in 1989 makes the progress in registration for secondary education seem pale in comparison and transfers the focus to higher education. Accelerated modernization has led to a demand for scientific and technological manpower; academicism has led to a demand for university trained personnel in positions which had been filled by graduates of secondary education. Budget cutting in higher education accompanied by higher selectivity in universities exacerbates the problem. Consequently, this project set the identification and fostering of gifted adolescents frdisadvantaged areas so that they would strive for university education and be prepared to persevere and succeed in different institutions of higher learning as a central goal.

In order to help implement that goal we decided that once a week the students would study at the university itself. Thus we felt that the pupils would become further motivated to achieve and move up. The university confers social status to them and becomes a frame of reference. They will become used to the idea that the university belongs to them and not only to those living in the environs of north Tel Aviv. They will feel at home in the university, familiar with its advantages and disadvantages.

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5. The belief that the intellectual potential of disadvantaged areas is greater than that represented by aptitude and achievement test results

The results of the aptitude and achievement tests we administered in the experimental area were gloomy indeed. In three large junior high schools (in which we administered normative tests to grades 7, 8 and 9) the average IQ[6] was 92-95 (the average for the Jewish population of Israel is close to 105). Only 8-12% of the seventh-grade students had an IQ of 110 or more, and that is the average IQ in selective "academic" high schools. The number attaining that level in ninth grade declined to nearly half, evidently because of the flight of the more gifted to other institutions. We continued on the assumption that the potential of these children is higher and that the pool of general ability is greater than indicated in the test results. Smilansky, 1957; Frankenstein, 1972; Feuerstein, 1973; Smilansky & Nevo, 1979 contain detailed reasons for our optimism.

Before inaugurating the project and during the first months of its operation, we visited elementary schools to observe the teaching and learning processes, examined the results of aptitude and achievement tests, and spoke with teachers and educational psychologists. We have no doubt that the learning patterns of the great majority of classrooms today do not fill the need for systematic intellectual fostering of children from non-intellectual homes. We have listed what we believe to be the components necessary to further cognitive, social and emotional development in any learning process. Only after a

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[6] Milta IQ test.

protracted, systematic experimental application will we be able to evaluate what the real possibilities are for enlarging the pool of higher aptitude students.

With this in mind we included all adolescents with an IQ of 100 or higher, and in the case of recommendations from teachers, children with an even lower IQ, in the fostering program. We hoped thereby to ensure that all who might have a higher potential than that represented by test results would be covered.

It should be stated at this juncture that the IQ is only one component of an individual's development. Our programs in the project encompass support of various developmental components as well as the dimensions of cognitive, social and emotional development. Despite past efforts and achievements, our knowledge of how to help adolescents further their own development is still very limited. We still need years of grappling with developing curricula, teaching methods, teacher- and counselor-training, evaluation and research techniques.

6. <u>The belief in a cognitive orientation with an affective basis within the framework of a comprehensive, flexible and systematic activity model including individual and group support</u>

In order to effect change and development within the students, the approach must be based on a cognitive orientation which is based on affective issues presented within the framework of comprehensive, flexible and systematic activities conducted with individual and group support. We have summarized this approach in a parallel paper (Smilansky, 1989), and a book will come out next year.

7. <u>The belief that adolescent learning is aimed at the promotion of responsibility for self-development and coping competence.</u>

This means that the school cannot be the sole focus for experimental activities, but the entire community must be involved. Learning opportunities exist throughout the community; adolescents must become acquainted with all the institutions of their communities and their roles in ensuring a livelihood to the community members. They should be aware of struggles to produce goods and services, to provide social services and to obtain political power. Smilansky 1986 discusses the development of boarding schools with a model of community involvement which contrasts greatly to the classic model of a closed institution. This project also involves the students in services organizations, cultural and artistic enterprises, and the world of political organizations and parties. This is extremely important, we believe, in furthering the development of all adolescents; however, it is even more crucial for the gifted. Their learning and involvement in the above activities will contribute greatly to their ability to cope with the future and will provide a background against which they may become a reserve force of gifted people in leadership positions within the institutions and organizations in their home areas.

IV. Aims of the Project

1. To seek proper ways to identify and foster the more gifted among the adolescents from disadvantages areas so that they will be prepared for normative expectations of post-secondary and higher education; to develop research materials, curricula and learning accessories, evaluation instruments, teacher training programs and group facilitators, etc.

2. To assist in the operation of regional centers for encouraging adolescents from disadvantaged areas--first in Tel Aviv and later in other places as well. The Tel Aviv center may serve as a model for

other places.

3. To serve the schools participating in the project as a support system, increasing their ability to meet their responsibilities, according to their own definition of their function.

4. To serve as an auxiliary unit for training teachers and counselors in the project's area of activity, so that if other local and regional authorities wish to utilize the curriculum, there will be a pool of trained instructors.

5. To try out the project's programs in other educational institutions--other schools, boarding schools of the Society for the Advancement of Education, army programs for soldiers with disadvantaged backgrounds, etc.

V. Organization of the Project and Composition of the Pupils

1. The project was set up as an experimental entity under the joint responsibility of the Tel Aviv municipality, the Ministry of Education-the Society for the Advancement of Education and the School of Education of Tel Aviv University. These three groups set up a joint management committee with the authority to determine the scope of implementation and approve the annual program and budget.

2. The decision to undertake the project was made in October 1983 and activity was planned to begin immediately in various areas simultaneously, in order not to lose an entire school year. During the first year 280 seventh and ninth graders from two schools of southeast Tel Aviv were selected. These students comprised 25% of the total number of students in their classes. Selection criteria included an IQ of 100 or more and/or a relatively high scholastic rank in the class, according to the judgment of the head teacher and counselor. Very few refused to participate in the project. At the end of the first semester the dropout rate was 3% and they were replaced by other children on the recommendation of their teachers, as had been promised in advance.

During the second year (1984-5) a new group of ninth grade students was added from the same schools (120 children) and a group of eighth and ninth graders from a new school in Jaffa (120 children) was selected according to the original criteria.

3. During the first year the budget allowed nine weekly hours of instruction per 20-student group. Half of those hours were spent at the university and the rest at the home school.

Because of different conditions in the three schools, three different administrative models evolved:

a. In one school the participants remained twice a week for two extra hours--Positive Peer Support Group activities, described in our special parallel report (Smilansky, 1989) and for a lesson of Critical Thinking and Communication, based on a special curriculum developed by the project staff (Affek et al., 1988). A third day they were bussed into the university for four academic hours the students chose from courses offered by the project.

b. In another school, eighth and ninth grade participants came to the school one evening a week for the enrichment program described in the school in "a"; a second evening they went to the university for the academic studies. During the day, they remained in their classes. However, those who continued to participate in the project were separated into special "project" classes in 10-12 grades.

c. In the Jaffa Comprehensive School, the pupils selected for the project were organized into separate "university-bound" classes." The reason for this decision was partly a public-relations one: this was the only high school in the area and the average IQ of students there ranged from 92-95. Therefore, the only way to prevent the parents of the more able pupils from pulling them out of the school, was to assure them that they would have an enriched curriculum five days a week in the school. On Fridays the students went to the university where they were offered six hours including a course in English or mathematics, Positive Peer Support Group activities, and elective courses.

VI. Components of the Fostering Program

As we stated in a memorandum to the Pedagogic Secretariat on "School as an Experimenting Proposition" (Smilansky and Sanders, 1972), we cannot know in advance what will be significant for the intellectual, social and emotional advancement of students. We must offer hypotheses and investigate their significance systematically, while, at the same time, being willing to be flexible in proposing alternative possibilities. Thus, the components listed below originate in theoretical or empirical assumptions which we, or others, feel have a reasonable probability of being significant for at least some of the pupils at certain stages of their development. Evaluation and development of issues can only be carried out during the course of implementation. In general, for the purpose of evaluative, organizational and budgetary planning, it can be said that the program will eventually be based on the following 12 elements:

1. Identification of Gifted Students. As in the case of the project of encouraging the gifted among pupils requiring fostering in the boarding schools (Smilansky & Nevo, 1979), the identification of gifted children is an important factor in creating motivation to learn and continue learning. The identification in 1983 was accomplished through teachers' evaluations and testing. The pupils and their parents were told (as was the case in the boarding schools) that the teachers and tests indicated the adolescent is potentially qualified to study in higher education if he makes the required effort and perseveres. We continued to use different variations on this formula throughout the entire process. In order to ensure open quality of the setup, the teachers were told that at the end of every trimester, they may add a pupil from their class who has proven he deserves to be

accepted. That provided the possibility that another 10% from each class could join the project each year. At the same time, the children and their parents were told that whoever does not persevere, or act as expected, will be dropped. Our experience in a previous experiment showed that this system worked, creating a balance that preserves receptivity, motivation and an almost stable number of participants.

2. Positive Peer Support Group. We assumed that a forum of peers is crucial to the development of adolescents. Therefore, every 20 students are members of a peer group guided by a counselor. The group meets once a week for two hours of activities according to a special approach and program--experiences aimed at learning to formulate goals and establish plans for the future and to develop the ability to cope. In addition, the counselor is available an hour a week for meeting and talking with individuals. The aims of the counselor are

(1) to bring the group together to act as a unit--assuming that the members have a similar background, similar goals, similar needs and problems, and to help them learn that mutual positive support is necessary to their success in striving towards formulating their dreams and realizing them;

(2) to help the students choose courses and contend with friends, parents and others in their life;

(3) to assess the students' development within the group and obtain evaluation from other significant people; and

(4) to help the project management by ensuring the implementation of the other components of the program as described below.

The counselors directing peer groups take part in a training

program held during vacation periods and bi-weekly during the school year. These group facilitators are counselors, psychologists or teachers and work part-time, in addition to their full-time jobs.

3. Development of Excellence in a Selected Area. The ability to attain control and relative excellence in a chosen field helps improve self image and self appraisal, increases positive valuation of peers, family, teachers and significant others; can provide focus for higher education, increase employment, career and self-realization opportunities. If this is a general truth, it is even more important within a population situated within a background requiring fostering; people who come out of a home and school maintaining a low level of intellectual activity and who have a limited ability to strive for excellence.

The project counselor's task has been to help each pupil identify an area or areas of excellence through taking courses at the University and find a mentor who will be able to further his interests working through the university and entering the professional field of choice.

Courses set up through the project consisted of twelve two-hour sessions per semester, meeting once a week. The assumption is that over the course of five years, from Grade Eight to Grade 12, each pupil will have studied ten courses. The subject areas are, at first, spread out in various fields and in later years are concentrated in the field of his choice. We assumed that eleventh and twelfth grade students would participate in regular university courses, mixed in with the regular students. However, in reality, this occurred with only a small number of students.

4. Development of Critical Thinking and Communication; Learning How to Study; and Developing Interest in Reading for Personal

Enrichment. The project organized a team to prepare curriculum and teaching aids aimed in four directions: the systematic development of critical thinking, the improvement of oral and written communication, the development of effective study habits, and the promotion of reading as a leisure-time activity.

The book, Critical Thinking and Communication plus a teachers' guide (Affek et al., 1988), was published by the team with respect to the first aim, through Ramot, Tel Aviv University Press. Because of budget cuts, we were unable to keep the team together and so work on other texts came to a stop. The team, now working under Neta auspices, is currently developing a curriculum for promoting recreational reading sponsored by the Ministry of Education.

5. Knowledge of English as a Foreign Language, on university level, and Mathematics and/or Natural Sciences, on Matriculation Examination level. Most failures in the Matriculation Examinations, held at the end of secondary schooling, occur in the fields of English and mathematics. Many students express a "fear" of mathematics and consequently avoid scientific and technological fields where mathematical knowledge is essential. In addition, without minimal fluency in English, many students cannot reach a level of competence in subjects which require a knowledge of English in order to read relevant scholarly and professional literature. Therefore, the project was organized such that students would participate in yearlong university courses in English and mathematics, in rotation, every year that they continued in the project.

In English, the staff adopted an individualized study approach and prepared an appropriate text. Since this approach is different from the learning patterns of regular high schools, there was no feeling of

competition between the project teachers and the teachers in the school. Most of the pupils and parents were satisfied. As we will note further on, test results showed relatively limited impact of the program.

In mathematics, the teachers from the schools and the students both felt the two programs overlapped a great deal. The school demanded homestudy in addition to 4-5 hours of class and the project teachers were not allowed to require homework, raising objections from the home school teachers. Evaluation at the end of the project did not show evidence of the project's contribution in this area.

6. Computer Courses. With the advent of the Information Revolution, facility in and knowledge of computer skills is crucial for both functioning in a university setting and future employment opportunities. Therefore, three of the project's course offering were related to computer literacy. In response to the great demand by students and parents, this was raised to six in the second semester. However, due to growth in the sheer numbers of students and limits set by the university, we had to limit this activity.

7. Preparation for Matriculation and University Entrance Examinations. Although we are committed to promoting profound, systematic development of values and knowledge--dealing with the individual as an intellectual and professional person--and fostering skill and ability to cope in other significant areas, we also felt we needed to fill a gap in terms of their chances to succeed in the forum of matriculation and university entrance examinations. Children from more affluent surroundings often have the help of private tutors as well as direct or indirect support from their family-members; therefore, we determined to provide a feasible substitute for our

pupils.

With the agreement of the Dean of Student Affairs of Tel Aviv University and under a grant from the ISFF Foundation, we established a course for preparation for university entrance examinations consisting of 10 meetings. The preparatory course, covering general scholastic aptitude and English, was prepared for the period when the first and second age cohorts reached twelfth grade. Students from other schools in disadvantaged areas were included in the course as a control group.

8. Contact with Parents. We enlisted parental cooperation throughout the entire term of the project. The first contact came immediately after candidates were selected. We held group meetings in each school during which we explained the goals of the project and the program of planned activities. We indicated how fortunate the parents were that their children had been selected to participate in this project and that success would depend on long-term perseverance in completing the tasks involved. We concluded the meeting by noting that although the adolescent's task was to take the responsibility for working hard, the parent's task was to support him and encourage him to persevere in the face of difficulties which were bound to arise. We promised to provide progress reports to the parents each semester and to maintain communication through the counselors and the project coordinators in the schools.

Ideally, we should maintain bi-weekly parent-adolescent group meetings providing systematic support for the parents' needs, so that they could develop the necessary positive transactions with their children (see our book Adolescent-Parent Relations, 1989). However, reality, in the form of budget and personnel limitations, intruded and such meetings were not held. Nevertheless, systematic, recurrent

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evaluation of parental attitudes towards project activities, student attitudes, and student progress provided clear evidence of how important parental support is for encouraging students to persevere in the face of a long-term, demanding program.

9. Cooperation with School Personnel. Previous experience had taught us that if we wanted an enrichment program, meeting once or twice a week after school, to have any chance of making an impact, we would have to work in close touch with the school personnel. This would include four major types of activity:

a. joint project and teacher planning of activities

b. contributions to the home institution including arrangement of classes, inservice training for teachers, improvements in social climate, learning and evaluation processes, and general effects of raising the ability and skill level of the top quartile of the student population

c. joint assessment of all the students in the home institutions, so that teachers, counselors and administration of both project and home institutions are aware of developmental processes occurring among the students of the home institution

d. discussions with homeroom teachers, as well as with other subject-area teachers, centering on the development and behavior in school and extracurricular activities of pupils participating in the project

At the end of five years we can safely say that we maintained the interest and cooperation of school management, and without such support, the project would have failed to survive its various developmental crises. The three school principals, their administration associates and the project coordinators developed very

positive relations and invested a great deal of effort in order to ensure the success of project activities. However, with regard to classroom teachers, we were not so successful. We did not invest the necessary effort to produce change and improvement in school practice. One explanation of this failure could be that other university commitments diverted the project management into other areas.

10. Summer Camp. We planned a summer program based on the assumption that such a program would improve the potential impact of the project. However, parents and students rejected such an option. They said they were already overburdened by the demands of both the schools and the project and needed the summer to relax, meet the demands of the school to upgrade school marks, to engage in family activities and to prepare work assigned for the summer.

11. Community Involvement. While planning the project we examined possible ways for the students to become involved within the community. There were four possible avenues for community activity:

a. experimental peer group activities in the field

b. student choice of volunteer activities in municipal services, public organizations and/or political parties

c. group experience during the summer--working in industry, agriculture or public service, in Tel Aviv or elsewhere

d. university courses which include field work, such as art course held in the Municipal Museum; political science courses which include contact with political parties, the municipality, and/or various departments in the Labor Federation; social work course introducing the students to issues of health, poverty and aging.

As described above in section 9, we were unable to implement

seriously the plans for community involvement. Other experimental projects (Smilansky, Burg, Krieger, 1966; Smilansky & Nevo, 1979) have shown that it is possible to attain community cooperation and involvement. However, pressure of the fast-growing numbers of students involved in the project, a part-time and underpaid staff and other outside limitations precluded any success in this area.

12. University Cooperation and Support. The university was seen serving in two roles for the project: a great potential resource for learning opportunities and a source of status for students within the project. When the project began the project directors, already well known in the university, approached department heads and directors of laboratories and asked for their cooperation. In the first and second years we were able to use laboratories and space and had to pay only for instructors and materials. With the growing numbers of students registering in the university, the curtailment of departmental budgets due to governmental policy and inflationary pressures, and the increase from 280 to 800 participating students, by the third year of the project our students were barred from the use of the space outside the School of Education building. The claim was that the students damaged or dirtied the laboratories and equipment. At that point, since the numbers of students attending classes in the school of education are around 2000, there was no choice but to limit the number of students participating in the project and hold classes only on Fridays.

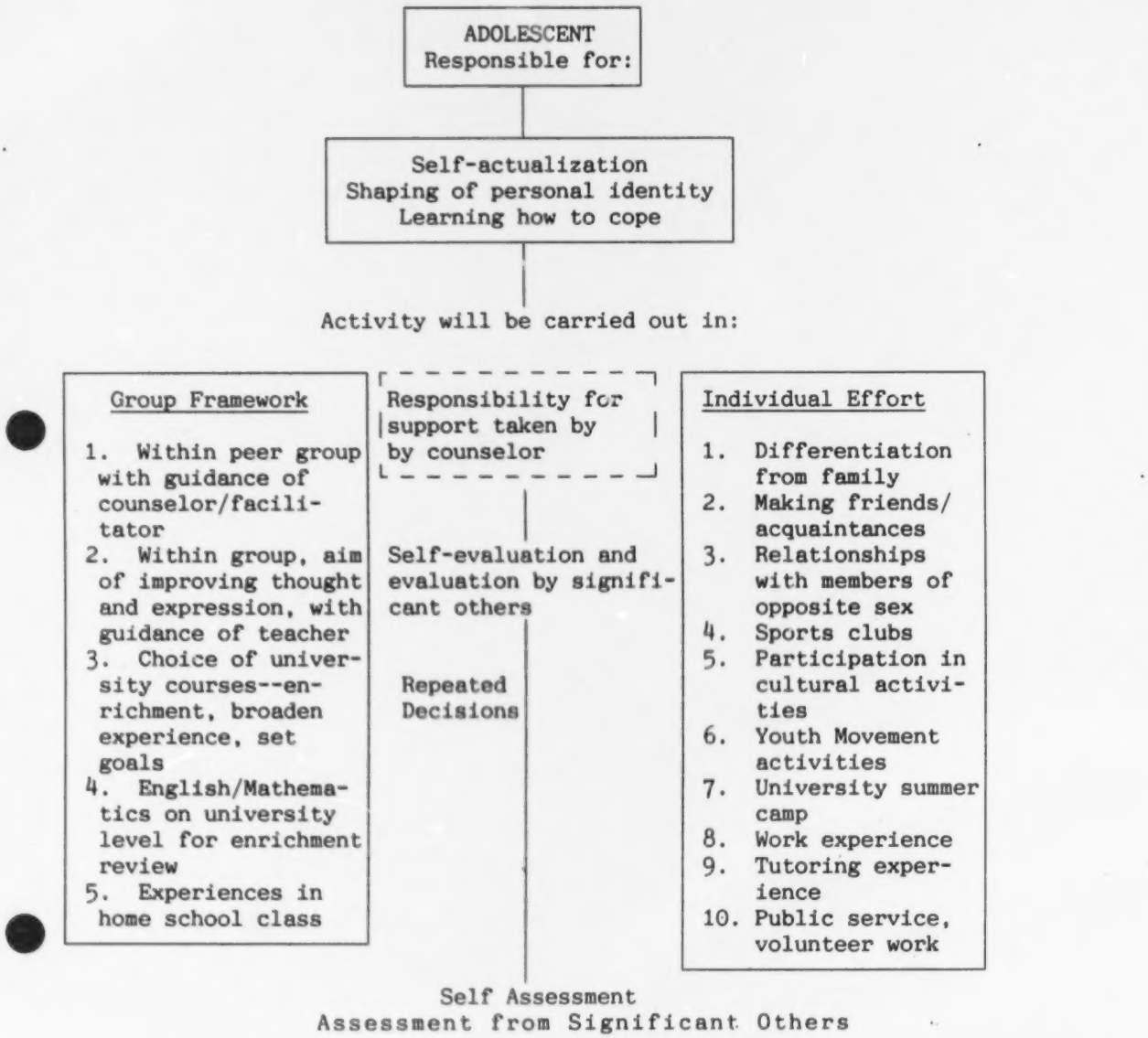
We learned from this that when we plan such projects we must take into account the objective and psychological restrictions entailed in using a university setting.

Summary

We have assumed that adolescence is a crucial stage in human

development and that school is responsible for providing comprehensive systematic support to those going through that stage. Adolescents are responsible for their own development and need support in developing their various skills and abilities. The focus of this support should be on arriving at psycho-social maturity through self-actualization, shaping of personal identity, and learning how to cope. Guides necessary for optimal experiencing of the process consist of educational counselors responsible for group and individual support, supportive peer groups, opportunities for systematic study leading toward a defined level of mastery, comprehensive, dynamic diagnostic evaluation during the process the aim of which will to produce someone who will be able to assess his own development, accept judgment from Significant Others and make decisions about continuing his efforts.

A flow-chart representing this model might look like this:


ADOLESCENT
Responsible for:
Self-actualization
Shaping of personal identity
Learning how to cope
Activity will be carried out in:
Group Framework
1. Within peer group with guidance of counselor/facilitator
2. Within group, aim of improving thought and expression, with guidance of teacher
3. Choice of university courses--enrichment, broaden experience, set goals
4. English/Mathematics on university level for enrichment review
5. Experiences in home school class
Responsibility for support taken by by counselor
Self-evaluation and evaluation by significant others
Repeated Decisions
Individual Effort
1. Differentiation from family
2. Making friends/ acquaintances
3. Relationships with members of opposite sex
4. Sports clubs
5. Participation in cultural activities
6. Youth Movement activities
7. University summer camp
8. Work experience
9. Tutoring experience
10. Public service, volunteer work
Self Assessment
Assessment from Significant Others
Group Activity
Individual Activity

VII. Evaluation of the Project: Design, Process and Impact

A. Design and Process

1. At our request the Dean of the School of Education appointed an evaluation committee composed of four professors specializing in evaluation methodology and two of the school principals. The committee approved evaluation plans, reviewed data and interim reports and suggested improvements.

2. The committee agreed, considering the multiple goals of the project, its dynamic, experimenting nature and limited financial resources, that:

a. there will be a preliminary study of the seventh and ninth grade populations of the target schools and control schools, considering socio-economic background, IQ, level of school achievement. One control school was located in the same area as the target schools and one in the north area of the city.

b. there will be a longitudinal follow-up study of two successive age cohorts within the project, to ascertain that the results of the first group is not by chance.

c. because of indecision whether to begin with seventh, eighth or ninth graders, the first age cohort in the upper 30% of the seventh and ninth grades of each school would be chosen. The following year, after evaluation of the evidence from the first year, it was decided to choose participants from candidates of the same ability

level beginning with eighth grade and to foster them through twelfth grade. One reason for moving from the seventh grade to the eighth was the factor that seventh grade represented the first year in the regional comprehensive high school. The students came into the school from six different elementary schools and there were many problems of adjustment and adaptation to the demands of the academic teachers. It was decided that it was too much to add the demands of the project to those of the new institution.

d. special issues would be defined for study in addition yearly evaluation of age cohorts. These special issues include parent participation in the project, evaluation of curriculum developed in specific areas (e.g.. Critical Thinking, Friendship, etc.), impact of specific courses, etc.

There were certain problems which were in addition to the usual difficulties in evaluating a multidimensional project involving both a process and a cumulative impact on the development and growth of individuals.

First, the population was very mobile; the student population was in constant flux, with students leaving and others arriving. Therefore, in order to avoid vacancies, we decided to admit newcomers.

Second, the experimental nature of the project meant continual changing organization, program schedule and people filling certain roles. Evaluation plans needed to be adapted accordingly.

B. Impact

During the five years of the project twelve interim reports were distributed for notice and remarks to the advisory board, project management and staff, and school principals. In this paper we will focus on four major issues:

1. patterns of those who remained in the project and those who dropped out.
2. evaluation of the impact of elective learning experiences
3. rate of success in Matriculation Examinations at the close of twelfth grade
4. rate of success in university entrance examinations (parallel to SAT examinations in the U.S.)

1. Patterns of Remaining In or Dropping Out of the Project.

Only about 45% of those entering the project in the eighth or ninth grades were active participants in the twelfth grade, in both cohorts. When we adjust for those pupils who moved out of the project area or out of the home schools, the dropout rate drops to 17-20%. That means that nearly 80% remained in the project although it was not compulsory. No other similar program in the world can make similar claims; it would seem that these figures are a clear indication of success despite difficulties noted above: poorly paid, often poor quality teachers, part-time counselors, limited learning facilities, mixed reactions from regular classroom teachers, etc. Information available about the dropouts indicates the following: they were less favorably motivated toward higher education (as measured by selection procedures applied before the invitation to join the project), they had difficulties at home or in adapting to school expectations, they expressed feelings that the project was not serving their immediate classroom needs.

Chart 1: Mapping Sentence of Evaluation Program

[summative / formative] evaluation on the basis of [students' / school staff / family / university staff] responses

when they are in [managed / collegial / managerial] status, regarding [administration / content / operations / implications] of

[existing / non-existing] activities aimed at [identification / development / effective use] of [affective / cognitive / instrumental]

skills in [personality / inter-personal / learning] dimension [(very positive) / (very negative)] evaluation

regarding [participation / non-participation] in the project.

2. Evaluation of Learning in Electives.

Teacher quality in project courses was dependent on many factors, chief among which was the willingness of university instructors or Ph.D. students to teach at the low pay scale of the project and their competence to teach adolescents. In addition, learning effectiveness was affected by the readiness of the students for such courses and the fact of the courses being voluntary ones in which homework was not allowed since regular school teachers viewed it as competitive with their demands of the students.

Evaluation of the courses was carried out from three vantage points:

a. who chose the courses: sex, background, ability, level of school achievement, etc.

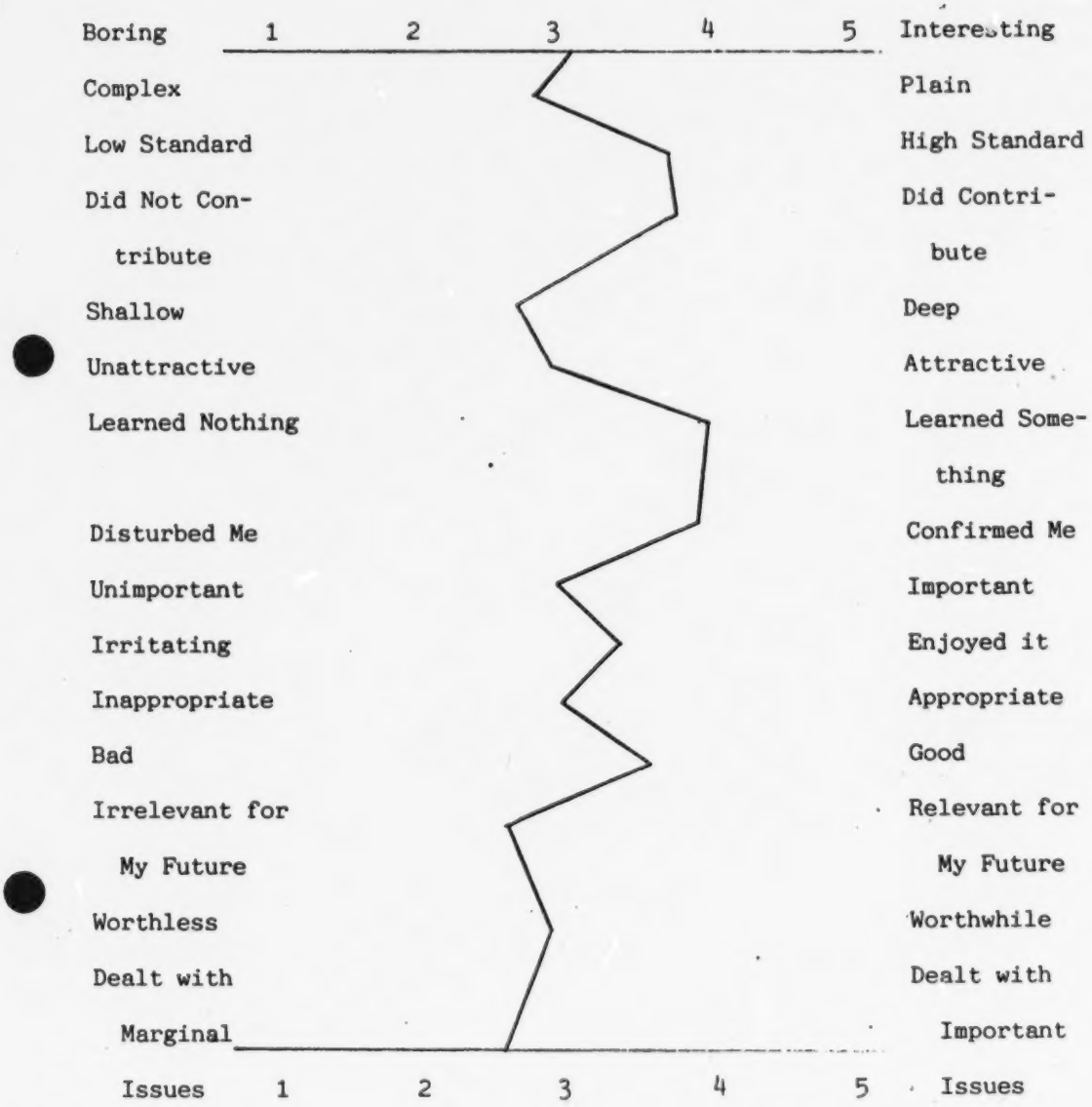
b. student evaluation of the teaching and relevance of the course to their lives and needs

c. achievement test scores

Chart 2 illustrates the curve of student evaluation of courses given in 1987-1988, based on a "semantic differential" questionnaire.

Analysis of student involvement in the various courses throughout the stages of project participation revealed that they engaged in heterogeneous subject areas and did not restrict themselves to certain types of courses. This was true regardless of IQ levels and sex.

Chart 2: Student Evaluation of Courses Attended in 1987-1988



The chart indicates that in general the students were pleased with the courses and felt they served their needs. The question arises how to assess what increase in knowledge occurred. Since the courses were non-standard school curriculum, there were no standardized achievement tests available. The decision was taken to administer the same test to those who had taken the course and to those who had not and evaluate the tests, considering the IQ level of the students. Table 1 illustrates the results of randomly selected courses from the 1987-1988 school year.

Table 1: Gain Scores in Enrichment Courses

Course	Mean IQ	5 = full knowledge Mean Scores of Knowledge Participants	Non-Participants	Explanation*
Climatology	108.3	3.5	1.8	Significant gain
Criminology	107.0	2.56	1.8	
Life Sciences	110.6	3.95	2.12	
Anthropology	103.8	3.73	2.41	
Theater	103.3	3.41	2.09	
Law	104.8	2.89	2.75	IQ dependent
Computers	104.8	1.50	1.73	Insignificant gain
Art	101.3	2.60	1.95	
Social Psychology	104.5	1.53	1.42	
Medicine	98.6	1.76	1.70	
Sociology	111.0	2.70	2.08	

*On the basis of t-test and one-way analysis of variance

This data indicates that despite the various difficulties described above there is positive evidence of increased knowledge as the result of participation in courses on the natural sciences and humanities. Courses like law seem to have a minimum IQ threshold. Cross checks, such teacher evaluations, indicate that teacher competence is not necessarily crucial in positive results in course impact. Sometimes the impact level of courses given by the same teacher was exactly the opposite of each other.

3. Impact of Learning English as a Foreign Language.

Work in English was assessed in much the same way as the other coursework, except the comparison was with those students who were studying mathematics during the year. Tests were administered both before and after the course. The course itself was based on an innovative approach involving communicative methods of teaching English (Vital, 1986) and received positive student evaluation in terms of its relevance. Achievement test results did not show a significant increase in their knowledge.

Therefore, during the last year of the project the program was restructured; the students were grouped according to their pre-test English level and a textbook was prepared by the English Teaching coordinator. A new assessment was made with pre and post course testing as well as student evaluation. The results showed a significant improvement in English knowledge ($T(106) = 5.04$, $p.<000$). However, when the initial entry level of the students, the home school and the level of the course itself is taken into consideration, the results are differential: significant improvement occurred for those students who scored higher in the pre-tests and, mainly, for students

from specific home school and grade level.

Such differential results would suggest that there is need for further improvement of the curriculum and teaching patterns. Student evaluation indicate their perception that they gained particularly in the areas of vocabulary and listening comprehension. Our feelings are that much more must be done to improve reading comprehension skills, something that will be necessary for all university bound students.

4. Impact of Mathematics.

Initial evaluations of the program showed insignificant impact. Therefore, during the last year the students were grouped into three entry levels and administered pre- and post-course tests. Results indicate some improvement in the achievement level ($T(75) = 6.36$, $p.<000$), but there is no clear evidence that it is because of the course itself.

5. Success in Matriculation Examinations.

In order to qualify as a candidate to study in higher education in Israel, every graduating secondary student must pass a series of Matriculation Examinations. These are divided in several subject areas, some of which are compulsory (English, Hebrew, Bible, Mathematics) and others which are elective (Physics, Biology, Chemistry, Music, French, etc.). In addition, one may take the exam in 3-5 units, corresponding to minimum to maximum breadth of expected knowledge. In order to be a serious candidate for university study, the student must receive high scores in five unit exams in the relevant subject area. Thus, the project encouraged its participants to work in order to pass the examinations with high marks as well as to plan for taking the maximum number of units in their subject area of choice.

Table 2: Achievement in Matriculation Examinations

School	Year	Subject	Level	N	%	Average Score Participant	Average Score National
No. 9	1987/8	Mathematics	3	29	70	83.6	67.1
			4	5	11	94.0	73.3
			5	8	19	88.7	71.1
		English	4	16	34	73.7	63.9
			5	30	66	74.7	77.4
	1988/9	Mathematics	3	57	64	69.5	61.6
			4	13	15	84.4	74.3
			5	19	21	68.9	6
		English	4	22	65	58.7	60.6
			5	77	78	66.5	76.4
No. 7	1988/9	Mathematics	3	25	65	80.7	61.6
			4	13	35	75.8	74.3
		English	4	6	17	61.3	60.6
			5	29	83	71.9	76.4

Chart 3: Scores on English Matriculation Examinations
School No. 9 and National Average

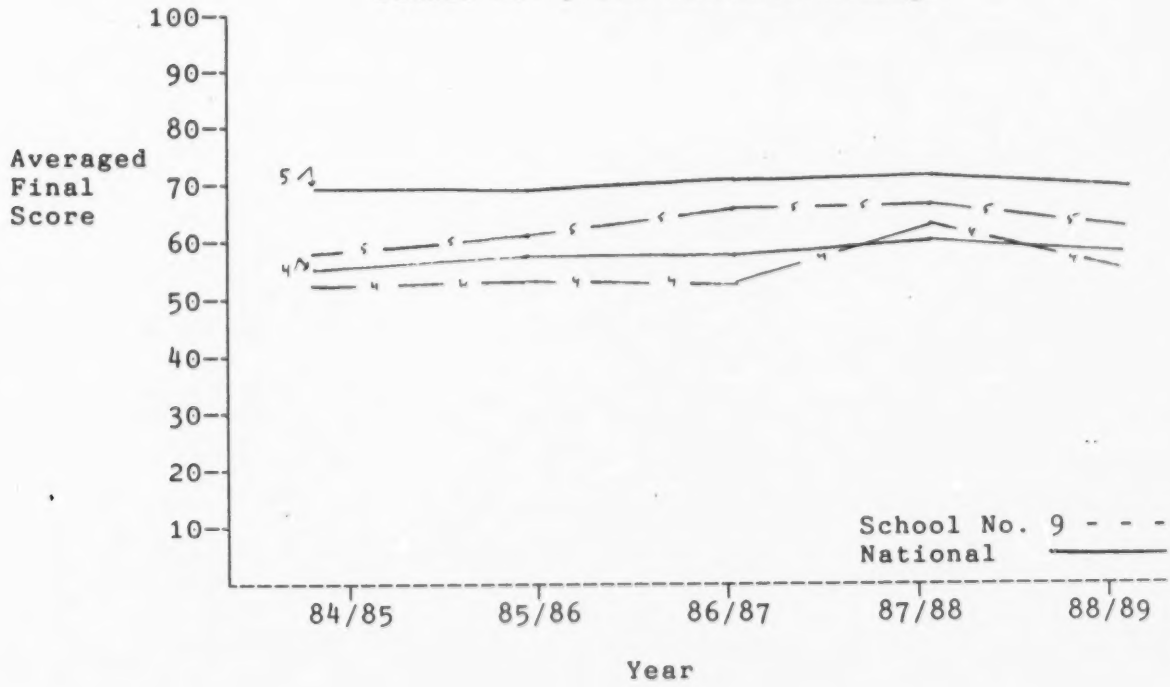


Chart 4: Scores on Mathematics Matriculation Examinations
School No. 9 and National Average

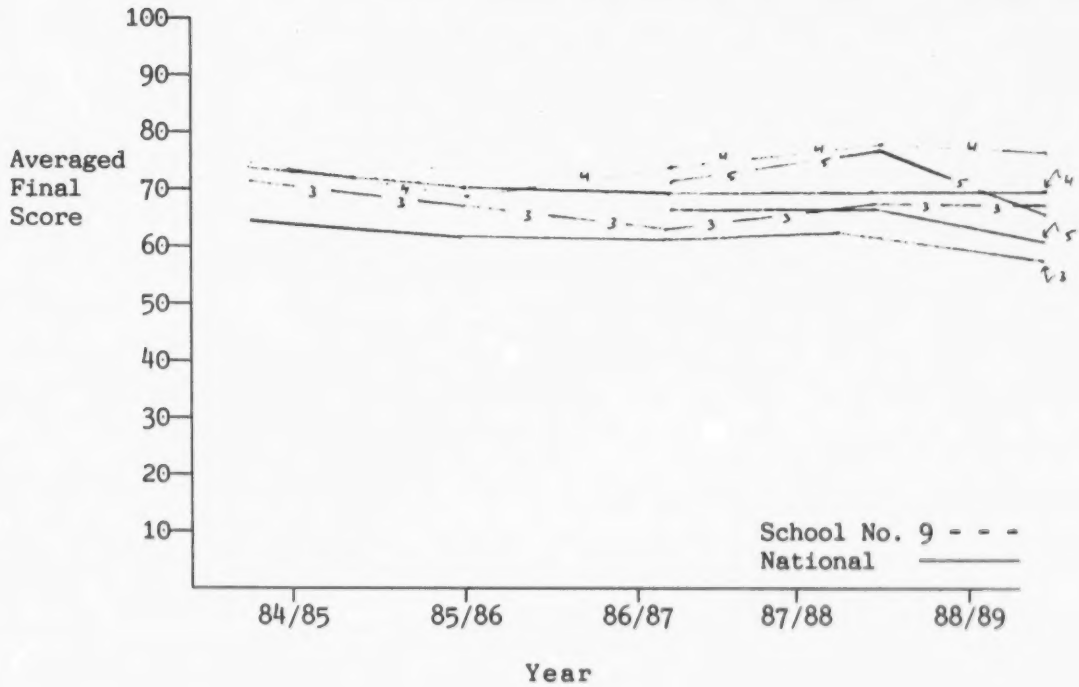


Table 2 and Charts 3 and 4 show clearly that the first age cohort from the project achieved high marks compared with the national average although the scores of the second age cohorts were somewhat lower. Generally, the high achievement level is attributed to more effective teaching in the regular classrooms and to the higher motivation and additional learning obtained through the five-year investment in participation in the project. Further analysis of the data must be carried through before we can specify what student characteristics correlate with better achievement in different examinations.

6. University Entrance Examinations.

The ultimate goal of the project was to produce greater numbers of students from these areas who

a. wish to attend university

b. actually participate in the selection process (apply and take examinations)

c. succeed in getting past the cutoff for a general BA or acceptance to non-selective departments

d. achieve high enough scores so that they are accepted in the more selective departments

According to the 1987 Report of the Israel Council of Higher Education, university education in Israel is highly selective, as in European countries:

70% of any age cohort reaches 12th grade

55% study in secondary tracks leading to Matriculation Examinations

38% of any age cohort passes the Matriculation Examinations

25% register as candidates for attending university

15-18% enter university

11% of an average age cohort actually complete a BA degree

There is a clear ethnic and socio-economic gap between students from European backgrounds and those from Middle-East and North African backgrounds: a ratio of 3.8 to 1 are accepted into university. Last year's entering students included only 24% of Middle-East and North African backgrounds whereas they make up around 55% of the age cohort.

Approximately 80-85% of the students in the schools served by the project have Middle-East and North African backgrounds and most of them are in the lower socio-economic strata. Therefore we could suppose that only about 6-7% of each age cohort attending these schools had any chance to be accepted in university. The project took on the responsibility to encourage the upper 25-30% of these schools to aim towards a university education.

Although the past 20 years has seen a large increase in places at the university, there has also been a matching increase in the number of candidates applying for these spots. The annual government statistical reports indicates that about 33% fail to be accepted each year despite passing Matriculation Examinations. With all these factors in mind, consider Table 3 below.

Table 3: University Entrance Examination Achievements
Participants and Control Group

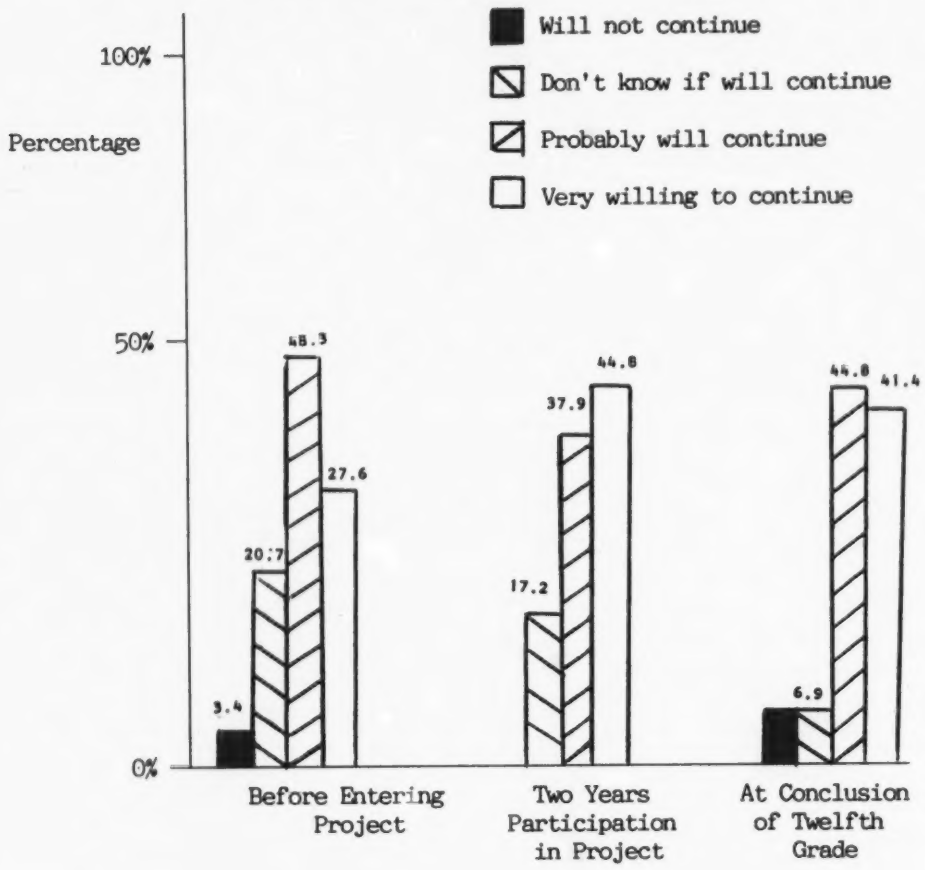
Participation in the project	Year	1988/1989			1987/1988		
	Parameter / School	% of Examinees	% Scores above national mean	% Scores above minimal cutoff	% of Examinees	% Scores above national mean	% Scores above minimal cutoff
Yes	No. 9	$\frac{92}{123} = 74.8$	41.1	70	$\frac{44}{64} = 69$	40.9	68.2
	No. 7	$\frac{30}{42} = 71$	30	76.7	$\frac{17}{45} = 38$	5.9	29.4
No	Or-Yehuda	$\frac{14}{74} = 18.9$	21.4	28.5	$\frac{11}{46} = 24$	18.6	63.6

Approximately 70% of students from each of two years (two follow-up cohorts) from School No. 9, into which two of the three project schools were amalgamated during the operation of the project, were well above the cutoff for acceptance into university. In addition about 41% scored higher on the test than the average for candidates from the entire country. School No. 7 joined the project a year later and so participated as part of the control group in the first year. Only 29% were over the minimum limit and only 6% (as expected) were over the national average. The next year 77% were above the cutoff and 30% over the national average.

In the pre-project cohort only 17 of 45 twelfth graders were ready to apply to university and take the tests; last year the number was nearly doubled to 30 of 42. The control school, Or Yehuda, confirms the statistics: in the first year only 11 of 46 took the tests and only 19% (two students) scored above the national average. In the second year only 14 of 74 twelfth graders took the tests and of these only 20% (three students) scored above the national average. It should be noted that both project students and those in the control group participated in the same 10-hour entrance exam preparatory course organized in cooperation with the Dean of Students of Tel Aviv University.

Similar results were evident with regard to the examination of proficiency in English, required concurrently with the Psychometric tests (similar to the SAT tests in the U.S.). About 40% of project participants scored above the national average, double the percentage in the control group.

Chart 5: Attitudes Towards University Study



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Analysis of data from the Psychometric entrance examinations, as correlated with previous evaluations carried out during the project years, reveals:

a. a positive correlation between the Milta IQ Tests (the Israeli adaptation of the Lorge Thorndike), administered to eighth grade project applicants, and the scores attained in the university entrance Psychometric examination

b. the following variables influencing Psychometric test results:

   1) student attitude towards university education measured after enrollment in the project (see Chart 5)

   2) student perception of his chances of being accepted to a university[7]

   3) students perception of his adaptation to school, measured before enrollment in the project

Such findings, based on a series of multiple regressions, enabled us to formulate a path analysis which, in turn, led us to suggest the following model of the project's impact on the students.

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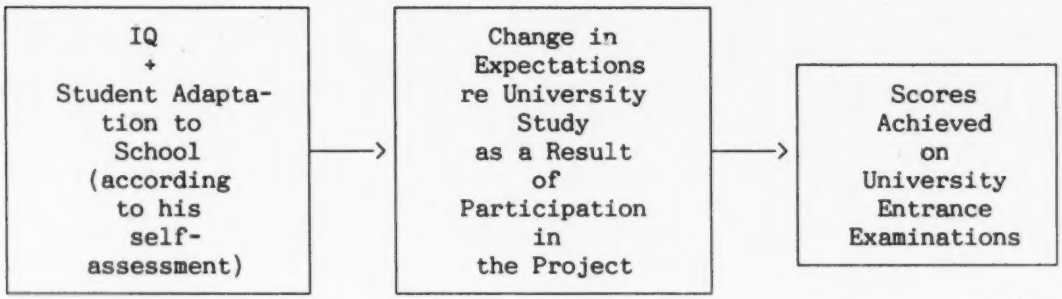
[7]It should be noted that attitudes towards continuing studies in university and perception of chances of acceptance to a university were not the same at all ability levels. Those students with IQ scores over 100 had higher self-expectations with regard to university study, while those lower had concomitantly lower expectations ($F(2,492) = 14.69$, $p. < .001$). Thus, the chart shows that lower ability students changed their self-expectations and middle ability students were encouraged to reach higher than they would have at the start.


IQ
+
Student Adaptation to School (according to his self-assessment)
Change in Expectations re University Study as a Result of Participation in the Project
Scores Achieved on University Entrance Examinations

The model reflects the positive impact of the student's IQ and adaptation to school leading to a change in attitude towards continuing his studies in a university setting after participation in the project. Each year 40-42% of the project participants stated that they had changed their attitude toward academic study as a result of their experiences in the project. The attitude change had a positive influence on achievement in the Psychometric tests used for determining university acceptance. Table 4 details the four predictors of success in the Psychometric examinations for the second cohort of the project (N = 171).

Table 4: Efficacy of Model in Explaining Achievement in University Entrance Examinations Second Cohort (N = 171)

Parameter Predictor	Pearson Corr	B	Beta
IQ	.80	7.51	.848
Interest in University Study	-.17	20.71	-.292
Student Adaptation to School	.30	34.57	.208
Attitude Change toward Academic Study	-.07	-14.16	.197

A similar analysis of the first project cohort yielded similar results, presented in detail in the interim report. Suffice it to say that it was clear that participation in the project increased the readiness and willingness of the students to consider studying in a university which, in turn, contributed positively in terms of scoring higher on Matriculation Examinations as well as on the university entrance examinations.

VIII. Conclusions and Recommendations

1. Operation of the project over five years demonstrated the following:

a. It is possible to create a social climate of cooperation between schools and university positing the managerial staff believes in such a goal and is supported by authorities located in the various agencies involved.

b. It is possible to enlist parental cooperation in disadvantaged areas. Parents expressed interest in the project, paid $50 a year, matched by funds from the municipality and the Ministry of Education, and encouraged their children to continue in the project despite various negative influences including peer pressure to drop out, conflicting interests, courses which he considered irrelevant.

c. It is possible to motivate adolescents to continue in a five year program: 70% of those who had not left the school continued to participate from the seventh or eighth grade through the twelfth.

d. The potential numbers of gifted and possible candidates for higher education in disadvantaged areas is higher than the rates for the country at large or for these areas.

This factors were true despite the many problems and limitations in terms of the project management, attitudes of the school teachers, problems with preparation of the project teachers, questions of university support, etc. It would seem that the municipal

authorities, the local boards of education and the Ministry of Education cannot put responsibility for the present, general educational situation on students and their parents.

2. Recommendations for improvements for similar projects in the future:

a. Permanent quarters (study rooms, laboratories) and equipment. It is impossible to be dependent on "good will" of department heads or secretaries; instructors and students cannot work at optimal levels if they are being pushed from pillar to post each week and never know where they will be studying.

b. Selection procedures should state definitively that

(1) candidacy for entering program is limited to those with IQ of 100 or above

(2) in addition to IQ levels and scholastic grade levels, teacher recommendation and expression of student interest are necessary for candidacy

(3) the number of participants is limited to avoid problems with overcrowding and the resultant disruption in the project organization

c. In addition certain recommendations for the project itself are:

(1) in order to ensure high quality instruction, selection procedures for counselors, teachers and instructors in the project should be improved and the pay scale should be raised

(2) each course should have clearly defined objectives, of which both students and teachers

are aware, so that a positive learning climate develops and the students can work towards mastery of the knowledge or skill.

(3) the process by which elective courses are chosen should be systematized so that pre-requisites are clear and assignments to be done at home are described. If a student is not admitted to a course and is put on a waiting list, it should be made clear what his chances are of being accepted to a similar course the following year or semester.

3. As we have seen the major impact of the project was in changing student attitudes towards studying at a university and it seemed to occur within the first two years of the project. Therefore, we believe it is possible to limit the time commitment to the project and thus reduce the budget per student. We have recommended three planning options:

a. Accepting candidates in eighth or ninth grades and continuing for two years, followed by a semester in their twelfth grade year during which they will receive a preparatory course for the university entrance examinations and support in planning for the future.

b. Accepting candidates for a two-year program beginning in the ninth grade.

c. Planning a course of study to take place during the summers and the pre-Passover vacation over two years, with a student option for a third year.

4. Next year the schools including universities and colleges will operate on a five-day week. Therefore, Fridays will be available to be used to meet special student needs. The Ministry of Education and the local or regional authorities should decide now in order to plan the necessary budgets, personnel, space, equipment, etc.

5. The Ministry of Education should take the responsibility of making commitments and sign an agreement with one university to take charge and serve as the National Center for activities of this sort: preparing plans, creating curricular units, training personnel in in-service workshops, evaluating programs, etc. We have prepared and submitted a memorandum on this to the Director General of the Ministry of Education.

6. Any project similar to this one should devote more effort on involving the home school teachers and the parents. If these two groups are not supportive of the objectives of the program and the student experience, there are clear limitations to the effectiveness of the project itself.

7. This experimental project was limited to three schools in south Tel Aviv. However, there are more students of similar background and ability who study in other secondary schools and do not receive the encouragement, support and training they need. In addition, there are other localities within the Tel Aviv district. The municipal elections indicated that an issue of major concern was education in general and education in disadvantaged areas in particular. Therefore, now is the time for the Ministry of Education and the university to call for a conference of mayors and present them with a way to meet this need.

8. A basic issue which arose during the project was the question whether students should remain in heterogeneous classes in the mornings and gather for enrichment courses in the afternoons or whether students should be grouped--tracked--in special project classrooms. We conducted a trial of both types of approaches. The experience showed that in a voluntary enrichment program held in the afternoons or evenings, the rate of attendance was about 50%. This had a negative influence in several directions: morale of the students dropped, instructors achieved less, and the per student costs rose. Therefore, our conclusion is that there should be some sort of flexible tracking within the school (as we have demonstrated in another region of the country) or the project should be concentrated on Fridays, as suggested above.

9. Ultimately, this project and others like it, are false solutions, to be implemented when a school system is not yet ripe for reformation. In our opinion, we feel the Israeli school system must be reformed so that it will better serve the needs of preparing its students for life-demands in the 21st century. We outlined this opinion in a memorandum submitted to the Director-General of the Ministry of Education and feel it is up to all concerned to mobilize and demand action toward this central task.

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